

What is claimed:

1. A method for identifying a compound capable of modulating cellular glycosylation, comprising:
 - a) contacting GTRAP3-18 with a test compound; and
 - b) determining whether the test compound binds to GTRAP3-18,wherein a compound that binds to GTRAP3-18 is identified as a compound capable of modulating cellular glycosylation.
2. A method for identifying a compound capable of modulating cellular glycosylation, comprising:
 - a) contacting a cell which expresses GTRAP3-18 with a test compound; and
 - b) assaying the ability of the test compound to modulate the expression of a GTRAP3-18 nucleic acid molecule or polypeptide, or the activity of a GTRAP3-18 polypeptide,wherein a compound that can modulate the expression of a GTRAP3-18 nucleic acid molecule or polypeptide or the activity of a GTRAP3-18 polypeptide is identified as a compound capable of modulating cellular glycosylation.
3. The method of claim 2, wherein the ability of the compound to modulate GTRAP3-18 nucleic acid or polypeptide expression or GTRAP3-18 polypeptide activity is determined by detecting the level of glycosylation of a GTRAP3-18 target molecule.
4. The method of claim 2, wherein the ability of the compound to modulate GTRAP3-18 nucleic acid expression or GTRAP3-18 polypeptide activity is determined by detecting the level of glutamate transport in the cell by a GTRAP3-18 target molecule.
5. The method of claim 2, wherein the ability of the compound to modulate GTRAP3-18 nucleic acid expression or GTRAP3-18 polypeptide activity is

determined by detecting the level of GABA transport in the cell by a GTRAP3-18 target molecule.

6. The method of claim 2, wherein the ability of the compound to
5 modulate GTRAP3-18 nucleic acid expression or GTRAP3-18 polypeptide activity is determined by detecting the level of dopamine transport in the cell by a GTRAP3-18 target molecule.

7. The method of claim 2, wherein the ability of the compound to
10 modulate GTRAP3-18 nucleic acid expression or GTRAP3-18 polypeptide activity is determined by detecting the level of amino acid transport in the cell by a GTRAP3-18 target molecule.

8. A method for identifying a compound capable of modulating cellular
15 glycosylation comprising:

- a) contacting GTRAP3-18 with a GTRAP3-18 target molecule under conditions that allow formation of a complex between GTRAP3-18 and the GTRAP3-18 target molecule;
- b) contacting the complex with a test compound; and
- 20 c) comparing the amount of complex formed in the presence of the compound with the amount of complex formed in the absence of the compound, wherein a compound which modulates the amount of complex formed, as compared to the amount of complex formed in the absence of the compound, is identified as a modulator of cellular glycosylation.

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9. The method of any one of claims 3, 4, or 8, wherein the GTRAP3-18 target molecule is a glutamate transporter.

10. The method of claim 9, wherein the glutamate transporter is selected
30 from the group consisting of: GLAST/EAAT1, GLT-1/EAAT2, EAAC1/EAAT3, EAAT4, and EAAT5.

11. The method of any one of claims 3, 5, or 8, wherein the GTRAP3-18 target molecule is a GABA transporter.

12. The method of any one of claims 3, 6, or 8, wherein the GTRAP3-18 target molecule is a dopamine transporter.

5 13. The method of any one of claims 3, 7, or 8, wherein the GTRAP3-18 target molecule is an amino acid transporter.

14. The method of any one of claims 1-13, wherein the compound is capable of treating a glycosylation associated disorder.

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15. The method of claim 14, wherein the glycosylation associated disorder is a neurologic or psychiatric disorder.

16. The method of claim 15, wherein the neurologic or psychiatric disorder is selected from the group consisting of: epilepsy, stroke, traumatic injury, chronic neurological disorders such as Alzheimer's disease, amyotrophic lateral sclerosis, Parkinson's disease, Huntington's disease, spinocerebellar ataxia, general neuromuscular disorders involving acute and chronic nerve or muscle injury, CNS inflammation, and schizophrenia

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17. The method of claim 15, wherein the glycosylation associated disorder is selected from the group consisting of an inflammatory disorder, AIDS, and cancer.

18. A method for modulating glycosylation in a cell comprising contacting a cell with a GTRAP3-18 modulator, thereby modulating glycosylation in the cell.

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19. The method of any one of claims 2-7 or 9-18, wherein the cell is a neuronal cell.

20. The method of any one of claims 18-19, wherein the GTRAP3-18 modulator is a small molecule.

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21. The method of any one of claims 18-20 wherein the GTRAP3-18 modulator is capable of modulating GTRAP3-18 polypeptide activity.

22. The method of any one of claims 18-21, wherein the GTRAP3-18 modulator is capable of modulating GTRAP3-18 nucleic acid or polypeptide expression.

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23. A method for treating a subject having a glycosylation associated disorder comprising administering to the subject a GTRAP3-18 modulator, thereby treating said subject having a glycosylation associated disorder.

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24. The method of claim 23, wherein said glycosylation associated disorder is a neurologic or psychiatric disorder.

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25. The method of claim 24, wherein the neurologic or psychiatric disorder is selected from the group consisting of: epilepsy, stroke, traumatic injury, chronic neurological disorders such as Alzheimer's disease, amyotrophic lateral sclerosis, Parkinson's disease, Huntington's disease, spinocerebellar ataxia, general neuromuscular disorders involving acute and chronic nerve or muscle injury, CNS inflammation, and schizophrenia

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26. The method of claim 23, wherein the glycosylation associated disorder is selected from the group consisting of an inflammatory disorder, AIDS, and cancer:

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27. The method of any of claims 23-26, wherein the GTRAP3-18 modulator is administered in a pharmaceutically acceptable formulation.

28. The method of any of claims 23-27, wherein the GTRAP3-18 modulator is administered using a gene therapy vector.

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29. The method of any of claims 23-27, wherein the GTRAP3-18 modulator is a small molecule.

30. The method of any one of claims 23-29, wherein the GTRAP3-18 modulator is capable of modulating GTRAP3-18 polypeptide activity.

31. The method of any one of claims 23-29, wherein the GTRAP3-18 modulator is capable of modulating GTRAP3-18 nucleic acid or polypeptide expression.

5 32. A method for modulating glycosylation in a subject comprising administering to the subject a GTRAP3-18 modulator, thereby modulating glycosylation in said subject.